This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Currently amended): A method of synchronizing asynchronous time-based and motion capture data in a system in which the time-based data and the motion data are transmitted by a server over a network to a client, the method comprising:

retrieving a time-based data stream and a motion capture data stream at the server, each stream comprising frames of data;

variably buffering one of the time-based data stream and the motion capture data stream at the server to produce two streams having synchronized frames;

multicasting separately the two streams; and

using the synchronized frames at the client for playback of synchronized motion capture data and time-based data to a user.

Claim 2 (Cancelled)

Claim 3 (Previously presented): The method of claim 1 further including calculating a difference between delays for the motion capture data stream and the time-based data stream through the server to determine an amount of variable buffering for a faster of the two streams.

Claim 4 (Original): The method of claim 1 further including transferring only those data values for a frame that have changed since a last frame was transmitted.

Claim 5 (Original): The method of claim 1 wherein the network is the Internet.

Claim 6 (Previously presented): The method of claim 1 wherein the motion capture data is mapped to control the movement of a virtual figure displayed in a scene at the client.

Claim 7 (Previously presented): The method of claim 1 wherein the motion capture data is generated by a body suit.

Claim 8 (Previously presented): The method of claim 1 wherein the motion capture data includes background data for use in producing a scene at the server.

Claim 9 (Previously presented): The method of claim 1 wherein data transfer from the server to the client is concurrent with the receipt of the time-based data stream and motion capture data stream at the server.

Claim 10 (Original): The method of claim 1 wherein the time-based data is voice data.

Claim 11 (Original): The method of claim 1 wherein the synchronized data frames include one or more data channels, the server transmitting on the network at a predetermined interval between synchronized data frames a descriptor packet which describes each channel contained in the synchronized data frames such that a client may join in progress a multicast of synchronized data frames.

Claim 12 (Previously presented): The method of claim 1 wherein the time-based data is a pre-recorded audio track and the method further includes synchronizing playback of the pre-recorded audio track at the server and buffering of the pre-recorded audio track to allow for coupling with motion capture data generated in time with the playback of the pre-recorded audio track.

Claim 13 (Original): The method of claim 1 further including sequencing synchronized frames output from the server to the client to provide for ordered playback of the synchronized frames to a user at the client.

Claim 14 (Currently amended): A method of packaging synchronized frames of three-dimensional motion data and time-based data where each frame includes one or more channels of data in a system in which synchronized frames of three-dimensional motion data and time-based data are transmitted by a server over a network to a client, the method comprising:

storing a last data value for each channel in each synchronized frame of three-dimensional motion data and time-based data transmitted over the network;

retrieving new synchronized frames of three-dimensional motion data and time-based data for transmission over the network; and

packaging and transmitting through separate streams over the network only data for channels having changed data values.

Claim 15 (Original): The method of claim 14 further including transmitting a descriptor packet at a predetermined interval over the network, the descriptor packet including channel descriptors for each channel in the synchronized frames.

Claim 16 (Currently amended): An apparatus resident on a server for synchronizing asynchronous time-based and three-dimensional motion data in a system in which the time-based data and three-dimensional motion data are transmitted by the server over a network to a client, the apparatus comprising:

a data retriever for retrieving a time-based data stream and a three-dimensional motion data stream at the server, each of the streams comprising frames of data;

a data stream synchronizer for buffering one of the time-based data stream and the three-dimensional motion stream to produce two streams having synchronized frames, wherein the two streams are multicasted separate of one another; and

a packetizer for packaging synchronized frames of three-dimensional motion data and time-based data for use at the client for playback of synchronized three-dimensional motion data and time-based data to a user.

Claim 17 (Previously presented): The apparatus of claim 16 further including a multicaster for multicasting the synchronized three-dimensional motion data and time-based data to clients couple to the network.

Claim 18 (Original): The apparatus of claim 16 wherein the packetizer includes a storage device and a comparator, the storage device for storing data values last transmitted over the network for each channel in each of the synchronized frames, the comparator for comparing data values for new frames with the data values stored in the storage device, the packetizer only packaging for transmission to the client channel data for channels having changed data values as determined by the comparator.

Claim 19 (Currently amended): A method for playing back time-based and motion capture data that has been synchronized and received as separate streams of data comprising:

mapping the motion capture data received in one or more of the separate streams to control the movement of a virtual figure in a scene displayed at a client; and

playing back in synchronization with movement of the virtual figure the time-based data received in one or more of the separate streams.

Claim 20 (Currently amended): A method of synchronizing asynchronous three-dimensional motion data and audio data at a server computer in a system in which the three-dimensional motion data and the audio data are transmitted through separate streams by the server computer to one or more clients, the clients providing a real time output of synchronized motion and audio data, the method comprising:

retrieving an audio stream of the separate streams including voice data and a three-dimensional motion data stream of the separate streams including one or more motion data channels at the server, each stream including frames of data;

calculating a delay through the server for a frame of data on each of the streams;

calculating a difference between the delay for the audio stream and the three-dimensional motion data stream to determine which of the two streams is faster;

variably buffering a faster of the streams to synchronize the audio stream and the three-dimensional motion data stream resulting in two output streams having synchronized data frames;

packaging the synchronized data frames;

multicasting the synchronized data frames to one or more clients over a network; and

at each client computer, using the synchronized data frames for synchronous playback of the audio and three-dimensional motion data for display to a user.

Claim 21 (Previously presented): The method of claim 1 wherein the motion capture data is sensor data.

Claim 22 (Previously presented): The method of claim 14 wherein the three-dimensional motion data is sensor data.

Claim 23 (Previously presented): The method of claim 16 wherein the three-dimensional motion data is sensor data.

Claim 24 (Previously presented): The method of claim 19 wherein the motion capture data is sensor data.

Claim 25 (Previously presented): The method of claim 20 wherein the three-dimensional motion data is sensor data.

Claim 26 (New): A method of synchronizing asynchronous time-based and motion capture data in a system in which the time-based data and the motion data are transmitted by a server over a network to a client, the method comprising:

retrieving a time-based data stream and a motion capture data stream at the server, each stream comprising frames of data;

variably buffering one of the time-based data stream and the motion capture data stream at the server to produce two streams having time synchronized frames; and

using the time synchronized frames at the client for playback of synchronized motion capture data and time-based data to a user.

Claim 27 (New): A method of packaging time synchronized frames of three-dimensional motion data and time-based data where each frame includes one or more channels of data in a system in which synchronized frames of three-dimensional motion data and time-based data are transmitted by a server over a network to a client, the method comprising:

storing a last data value for each channel in each time synchronized frame of three-dimensional motion data and time-based data transmitted over the network;

retrieving new time synchronized frames of three-dimensional motion data and time-based data for transmission over the network; and

packaging and transmitting over the network only data for channels having changed data values.

Claim 28 (New): An apparatus resident on a server for synchronizing asynchronous time-based and three-dimensional motion data in a system in which the time-based data and three-dimensional motion data are transmitted by the server over a network to a client, the apparatus comprising:

a data retriever for retrieving a time-based data stream and a three-dimensional motion data stream at the server, each of the streams comprising frames of data;

a data stream synchronizer for buffering one of the time-based data stream and the three-dimensional motion stream to produce two streams having time synchronized frames; and

a packetizer for packaging synchronized frames of three-dimensional motion data and time-based data for use at the client for playback of synchronized three-dimensional motion data and time-based data to a user.

Claim 29 (New): A method for playing back time-based and motion capture data that has been time synchronized comprising:

mapping the motion capture data to control the movement of a virtual figure in a scene displayed at a client; and

playing back in synchronization with movement of the virtual figure the time-based data.

Claim 30 (New): A method of time synchronizing asynchronous three-dimensional motion data and audio data at a server computer in a system in which the three-dimensional motion data and the audio data are transmitted by the server computer to one or more clients, the clients providing a real time output of synchronized motion and audio data, the method comprising:

retrieving an audio stream including voice data and a three-dimensional motion data stream including one or more motion data channels at the server, each stream including frames of data;

calculating a delay through the server for a frame of data on each of the streams;

calculating a difference between the delay for the audio stream and the three-dimensional motion data stream to determine which of the two streams is faster;

variably buffering a faster of the streams to synchronize the audio stream and the three-dimensional motion data stream resulting in two output streams having time synchronized data frames;

packaging the synchronized data frames;

multicasting the synchronized data frames to one or more clients over a network; and

at each client computer, using the synchronized data frames for synchronous playback of the audio and three-dimensional motion data for display to a user.